

# Telecommunications Initiatives Activities and Status

Information Systems  
Coordinator

June 22, 2004

# **Moving to a New and Improved Network**

**In Support of Patient Care**

## **■ Current Network**

- **IHS maintained a wide area network that supports patient data transfer, finance, personnel, E-mail and Internet Access**

## **■ Remote Interactive Health Care**

- **We are moving to a true remote interactive health care solution that supports High Speed Large Capacity telemedicine transport facilities**

## **■ Upgrading The Network**

- **New network technology that supports secure & high capacity bandwidth to distant health clinics**

# Moving to a New and Improved Network

## In Support of Patient Care

- HHS (VBNS) Net
  - As part of the “One HHS” the Indian Health Service along with the other Opdevs in HHS are combining their networks into one integrated network, based on VBNS
    - Very high performance Backbone Network Service
      - A cost effective network based on the latest industrial standards with a fully meshed network using high speed switching equipment (Juniper switching equipment)
      - This new network will allow high speed connections at much higher bandwidth than is currently available
      - With this higher speed not only the current users on the network will be serviced but also all aspects of Telemedicine can be supported.
      - Significant reduction in costs for this network (20% to 25%)

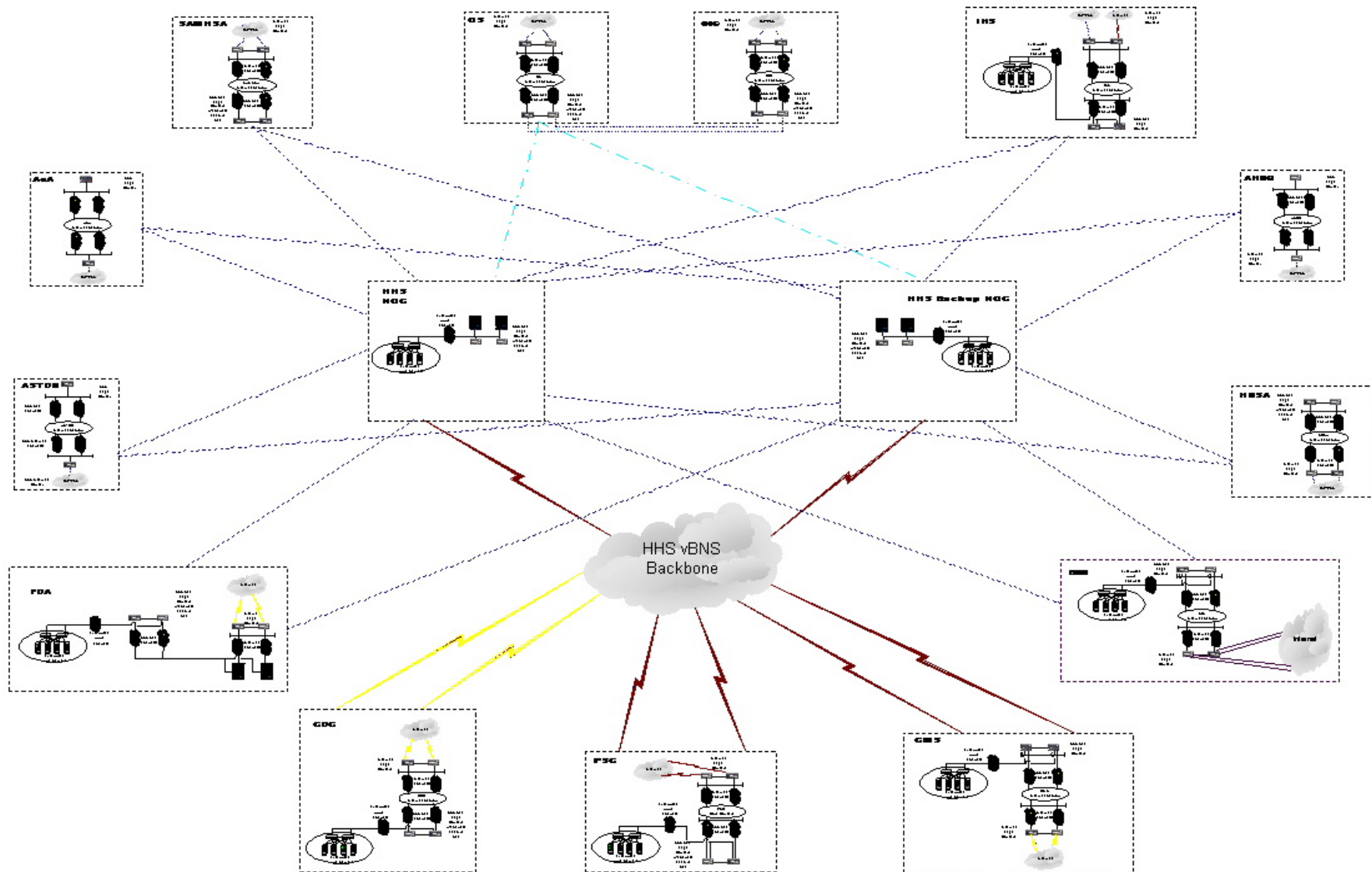
# **Moving to a New and Improved Network**

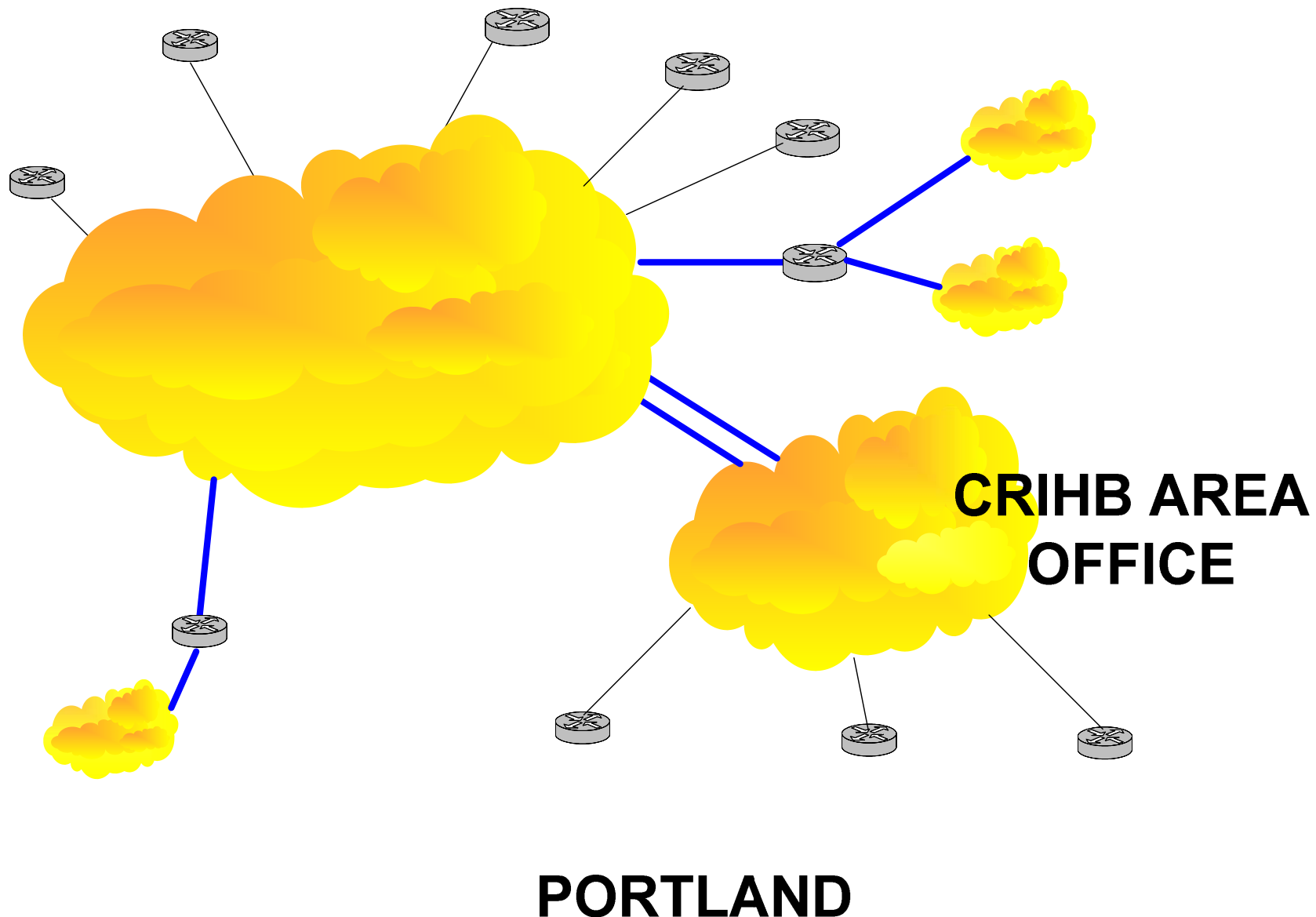
## **In Support of Patient Care**

- **Secure Network with Adequate Bandwidth**
  - This secure high speed bandwidth is offered via the MCI FTS 2001 contract is incorporated in a new network topology called VBNS (Very High Performance Backbone Network Service)
- **VBNS**
  - VBNS by MCI is based on the latest Juniper high speed routers placed throughout the MCI network that allows high data transfer with fail safe redundant paths that will allow sites to continue operating even when major sites such as ABQ, in the old network model, are down

- Phase I – Convert Circuits to VBNS
- Phase II Enterprise Network Segment
  - NOCs at Rockville & Downtown DC
- Phase III – Internet Network Segment
- Phase IV – Co-located Circuits

# Health & Human Services Enterprise Services Infrastructure





# Moving to a New and Improved Network

In Support of Patient Care  
Current Status

- All area offices converted except
  - Navajo
- T1 connections to the VBNS from Health Facilities (62 circuits) completed
- 303 Frame Relay circuits will be completed by June 30, 2004



# Windows & Exchange 2003

## “One HHS”

### ■ HHS E-Mail

- As part of the “One HHS” the Indian Health Service along with the other Opdevs in HHS are combining their E-mail into one integrated E-Mail system
  - A cost effective implementation of HHS E-mail that will allow for the interaction of all Opdevs within HHS to communicate with each other
  - This combined E-mail system will provide a cost effective solution for all HHS Opdevs
  - With this higher speed network configuration of the VBNS network IHS as well as other HHS Opdevs will have efficient connect to the centralized E-mail system
  - Completion scheduled for Early Spring of 2005
  - Contractor Selected

# Universal Services Fund

## ■ Indian Health Service Rural Health Care Credit Report Year 2002

Total Credit \$181,221.37 + Todate

- Two years Late
- Lack of personnel at MCI

## ■ Where Did These Funds Go??

- Began posting February data to the FTS
- Posting 2003 in October, 2004
- Posting 2004 in December, 2004

# IP Address Overlap - NAT

- Kayenta, Chile, & PIMC
  - Overlapping IP addresses in the private range
    - PIMC
      - 172.16.16.0/20
    - Kayenta
      - 172.16.20.0 /24
      - Overlaps with PIMC 172.16.16.0/20
    - Chile
      - 172.16.30.0/23
      - Overlaps with PIMC 172.16.16.0/20

# Private IP Space

## Recommendation

- Recommendation:
- 10.254.0.0/16 - ITSC
- 10.253.0.0/16 - Aberdeen
- 10.252.0.0/16 - Albuquerque
- 10.251.0.0/16 - Alaska
- 10.250.0.0/16 - Bemidji
- 10.249.0.0/16 - Billings
- 10.248.0.0/16 - California
- 10.247.0.0/16 - CRIHB
- 10.246.0.0/16 - Nashville
- 10.245.0.0/16 - Oklahoma
- 10.244.0.0/16 - Phoenix
- 10.243.0.0/16 - Portland
- 10.242.0.0/16 - Rockville
- 10.241.0.0/16 - Tucson